

REMARKS

Status of the claims

Claims 12-31 were pending in the present application. By virtue of this response, claims 12-31 have been amended, and new claims 32-34 have been added. Accordingly, claims 12-34 are currently under consideration.

Support for the claim amendments and new claims may be found in the specification. The amendment to claim 23 is supported, for example, on page 6, line 21. The amendments to claims 29 and 30 are supported, for example, on page 7, line 15. New claim 32 is supported, for example, in Example 2, pages 10-11. New claims 33 and 34 are supported, for example, on page 5, lines 9-12. Amendments to claims 12-31 were made to correct typographical and/or clerical errors, and/or to improve clarity.

With respect to any claim amendments or cancellations, Applicants have not dedicated to the public or abandoned any unclaimed subject matter and moreover have not acquiesced to any rejections and/or objections made by the Patent Office. Applicants expressly reserve the right to pursue prosecution of any presently excluded subject matter or claim embodiments in one or more future continuation and/or divisional application(s).

Information Disclosure Statement

A Supplemental Information Disclosure Statement is being filed concurrently with this response. Applicants would appreciate the Examiner initialing the Form 1449, indicating that the references listed therein have been considered and made of record in this application.

Rejection under 35 U.S.C. §112, second paragraph

Claims 12-31 are rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite due to recitation of the phrase “moderate or high water activity.” Applicants respectfully traverse this rejection.

Applicants note that U.S. Patent No. 6,602,841, cited in the present Office Action in a double patenting rejection, contains the phrase “moderate or high water activity” in independent

claims 1 and 9. Thus, the Office has found this language to be definite and in compliance with 35 U.S.C. §112, second paragraph. Further, as noted in the response to the February 22, 2006 Office Action, a definition for this phrase is provided on page 4, lines 18-21, of the specification. In view of the definition, the meaning of this phrase in the claims of the present application would be clear to a person of skill in the art, and indeed was found by the Office to be clear, in view of the issuance of U.S. Patent No. 6,602,841 with claims reciting this phraseology.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §112, second paragraph.

Rejection under 35 U.S.C. §102(b)

Claims 12-31 are rejected under 35 U.S.C. §102(b) as allegedly anticipated by Herdeman, U.S. Patent No. 4,707,287 (“Herdeman”). Applicants respectfully traverse this rejection.

Referring to column 7, lines 10-11, of Herdeman, the Examiner states that “the granule [disclosed by Herdeman] has a moisture content of 3-10%.” Applicants respectfully disagree. Herdeman teaches an enzyme core with a water content less than 10%, but not a granule with moderate or high water activity as claimed. The full passage of Herdeman containing the excerpt referred to in the Office Action states: “5. Dry in a fluidized bed the moist granulate core of Step 4 until a dryness which satisfies both the requirements of enzyme stability and the requirements of free-flowing properties and mechanical strength. Usually this will correspond to a water content less than 10%, preferably less than 3% and more preferably bone dry.” Column 7, lines 6-11, emphasis added.

Herdeman teaches an enzyme-containing granule with a core that is “preferably bone dry” and says nothing about the hydration state of the alkaline salt layer that is coated over the core or the water activity of the granule as a whole. In the Examples, Herdeman teaches spraying of a salt solution onto a dried enzyme-containing core in a fluid bed dryer at 70° C, and then drying at a fluid bed temperature of 75° C to produce granules that “contain less than 0.5% water.” Column 8, lines 56-64, emphasis added. Thus, the granules taught by Herdeman are dried to remove most or all of the water that was sprayed on in the aqueous salt solution. Such granules would be anhydrous or mostly anhydrous, and would not have a moderate or high water

activity as recited in the present claims. Herdeman does not teach a granule with a hydrated barrier material coated over a protein core or a granule having moderate or high water activity, and thus does not anticipate the claimed invention.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §102(b).

Rejections under 35 U.S.C. §103(a)

Claims 17 and 27 are rejected as allegedly unpatentable under 35 U.S.C. §103(a) over Herdeman in view of Painter et al., U.S. Patent No. 5,292,446 (“Painter”) and Dychdala et al., U.S. Patent No. 3,793,216 (“Dychdala”). Applicants respectfully traverse this rejection.

As discussed above, Herdeman does not teach a protein-containing granule with a hydrated barrier material coated over a protein core or a granule with a high or moderate water activity as claimed. Painter and Dychdala do not cure these deficiencies.

Painter teaches use of sodium citrate dihydrate, sodium carbonate, and sodium sulfate in a process for producing a granular automatic dishwashing detergent, but does not teach or suggest a protein-containing granule with a hydrated barrier material surrounding a protein core or with a high or moderate water activity.

Dychdala teaches calcium hypochlorite compositions. This reference does not teach or suggest a protein-containing granule with a hydrated barrier material surrounding a protein core or with a high or moderate water activity. The Examiner states that Dychdala discloses using hydrated inorganic salts including sodium phosphate dibasic heptahydrate to provide a water content of 3-13%. Office Action, page 4, lines 1-3. Applicants note that the Dychdala does not disclose any composition that contains a protein or enzyme. The 3-13% water content referred to by the Examiner relates to a calcium hypochlorite composition with a hydrated inorganic salt, not a protein containing granule. There is no disclosure or suggestion in this reference of a hydrated barrier material surrounding a protein core as claimed.

Neither Herdeman, Painter, nor Dychdala, nor a combination of these references, teaches or suggests all of the elements of the claimed invention as required for a rejection under 35 U.S.C. §103(a). None of the references suggests production of a protein-containing granule with

a hydrated barrier material and a moderate or high water activity. Further, a person of skill in the art would not predict success in arriving at the claimed invention from reading these references, which is also required to sustain a rejection under 35 U.S.C. §103(a). Herdeman teaches a protein core that is “preferably bone dry” and drying of a salt-coated granule to “less than 0.5% water.” Thus, Herdeman teaches away from the claimed granules, which contain enough water to impart a condition of moderate or high water activity. Neither Painter nor Dychdala teaches desirability or a means of achieving a protein-containing granule with a hydrated barrier material coated over a protein core to contradict the teaching away of Herdeman. Thus, a skilled artisan would not predict success in arriving at the claimed invention from the cited combination of references.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

Claim 28 is rejected as allegedly unpatentable under 35 U.S.C. §103(a) over Herdeman in view of Painter and Dychdala, and further in view of Arnold et al., U.S. Patent No. 5,324,649 (“Arnold”). Applicants respectfully traverse this rejection.

As discussed above, neither Herdeman, Painter, Dychdala, nor a combination thereof teaches or suggests the elements of a hydrated barrier layer coating an enzyme-containing core and a granule with moderate or high water activity, as recited in the present claims, and the references also do not provide a reasonable expectation of success, either singly or in combination, in practicing the claimed invention. Arnold does not cure these deficiencies.

Arnold does not teach a granule with a hydrated inorganic barrier salt surrounding a protein core or a protein-containing granule with moderate or high water activity.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

Claims 29-31 are rejected as allegedly unpatentable under 35 U.S.C. §103(a) over Herdeman. Applicants respectfully traverse this rejection.

The Examiner states that “[s]electing preferred optimum temperatures for preparing the granule of Herdeman would have required only limited routine experimentation and been obvious.” Office Action, page 5, lines 11-13. Applicants respectfully disagree. Herdeman teaches coating of a salt onto a dried enzyme core at 70° C and further drying of the granules at

75° C. As discussed above, the conditions taught by Herdeman result in an anhydrous or nearly anhydrous granule. Thus, Herdeman teaches away from the claimed invention. Since Herdeman teaches that a dry particle is desirable, it would not be obvious to a skilled artisan to alter the coating temperature to result in a less dry granule with moderate or high water activity.

In view of the foregoing, Applicants respectfully request reconsideration and withdrawal of the rejection under 35 U.S.C. §103(a).

Double Patenting

Claims 12-31 are rejected on the ground of nonstatutory obviousness-type double patenting as allegedly unpatentable over claims 1-20 of U.S. Patent No. 6,602,841. Applicants would like to defer consideration of this issue until the Office indicates that the present application contains allowable subject matter.

CONCLUSION

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 07-1048, referencing Docket No. GC515-2-US-C1. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

Respectfully submitted,

Dated: August 10, 2007

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